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10/597,576	10/09/2007	John G. Hildebrand	CCPC 0122 PUSA4	3052

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/597,576	HILDEBRAND ET AL.	
	Examiner	Art Unit	
	Nnenna N. Ekpo	2425	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-11,13-15,17,19 and 21-24* is/are pending in the application.

4a) Of the above claim(s) *5,6,12,16,18 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 7-11, 13-15, 17, 19, 21-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement

1. This Office Action is responsive to the arguments filed on March 09, 2009.

Specification

2. Previous objection to the abstract is withdrawn in view of Applicant's amendment filed on March 09, 2009.

Claim Objections

3. Previous claim objection to the claim is withdrawn in view of Applicant's amendment filed on March 09, 2009.

Claim Rejections - 35 USC § 101

4. Previous 101 rejections to the claims are withdrawn in view of Applicant's amendment filed on March 09, 2009.

Response to Arguments

5. Applicant's arguments filed 03/09/2009 have been fully considered but they are not persuasive.

6. Applicant argues on 9+ of the 03/09/2009 Remarks that the claim limitations "switch configured to simultaneously separate packets associated with the AV only transport from packets associated with the integrated transport/a switch configured to simultaneously route the first transport to a demultiplexer and the second transport to a data processor, SVD wherein the AV only transport is associated with a baseline architecture, wherein the integrated transport is associated with an external mode 1

architecture and wherein the integrated transport is associated with an extended mode 2 architecture" as recited in claims 1-4 and 21.

In response to arguments, Examiner disagrees. Regarding claims 1 and 21, Perlman discloses switch configured to simultaneously separate packets associated with the AV only transport from packets associated with the integrated transport/a switch configured to simultaneously route the first transport to a demultiplexer and the second transport to a data processor in col. 2, lines 50-col. 3, line 6, a switch selects a signal from two signals inputted into the switch, therefore if two signals are being simultaneously received then clearly the switch simultaneously selects one of the signals, thereby simultaneously switching between two signals.

In response to the argument that Perlman and Rakib fail to disclose SVD wherein the AV only transport is associated with a baseline architecture, Examiner respectfully disagrees. Perlman discloses in col. 4, lines 61-col. 5, line 14 that the content providers transmit multimedia content i.e. audio/video content, MPEG2 from the head end to the end user, Rakib, paragraphs 0033 and 0039 also discloses this feature.

In response to the argument that Perlman fails to disclose wherein the integrated transport is associated with an external mode 1 architecture, Examiner disagrees. Perlman discloses this feature in col. 3, lines 41-62 that MPEG2 and DOCSIS share the QAM demodulation logic, which implies that the share the same/single stream and that MPEG and DOCSIS stream are combined.

In response to the argument that Chelehmal et al. fails to disclose wherein the integrated transport is associated with an extended mode 2 architecture, Examiner

disagrees. Chelehmal et al. discloses this feature in paragraphs 0025-0028 that RTP, UDP, IP and DOCSIS are being combined.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over El-Rafie (U.S. Patent No. 6,968,394) in view of Perlman (U.S. Patent No. 6,813,643) and Chelehmal et al. (U.S. Publication No. 2002/0046406).

Regarding **claim 13**, El-Rafie discloses a computer-readable medium having a data structure comprising:

an application layer defining creation of the video, audio, and data signals (see fig 7B (211), col. 15, lines 19-32);

a transport layer defining management of the video, audio, and data signals (see fig 7B (212), col. 15, lines 19-36, col. 28, lines 7-24);

a network layer defining transmission of the video, audio, and data signals processed according to the transport layer so as to permit the transmission of the signals between networks (see fig 7B (213), col. 15, lines 19-36, col. 24, lines 38-54);

a link layer defining multiplexation of the video, audio, and data signals into the common transport (see fig 7B (214), col. 24, lines 65-col. 25, lines 14); and

a physical layer defining transportation of the common transport over the cable system (see fig 7B (215), col. 8, lines 3-7, lines 26-39).

However, El-Rafie fails to specifically disclose wherein the layers support a baseline architecture, an extended mode 1 architecture, and an extended mode 2 architecture.

Perlman discloses wherein the layers support a baseline architecture (see col. 4, lines 61-col. 5, line 14, the content providers transmit multimedia content i.e. audio/video content, MPEG2 from the head end to the end user), an extended mode 1 architecture (see col. 3, lines 41-62, MPEG2 and DOCSIS share the QAM demodulation logic, which implies that the share the same/single stream and that MPEG and DOCSIS stream are combined).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify El-Rafie's invention with the above mentioned limitation as taught by Perlman for the advantage of providing cable operators and other multimedia content providers with the ability to transmit video.

However, El-Rafie and Perlman fail to specifically disclose an extended mode 2 architecture.

Chelehmal et al. discloses an extended mode 2 architecture (see paragraphs 0025-0028, RTP, UDP, IP and DOCSIS are being combined).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify El-Rafie and Perlman's invention with the above mentioned limitation as taught by Chelehmal et al. for the advantage of allowing data to be transferred through the managed IP network with a guaranteed quality of service which is at least sufficient to allow broadcast quality video to be transmitted to the head end.

9. **Claims 14 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Rafie (U.S. Patent No. 6,968,394), Perlman (U.S. Patent No. 6,813,643) and Chelehmal et al. (U.S. Publication No. 2002/0046406) as applied to *claim 13* above, and further in view of Craven et al. (U.S. Publication No. 2005/0123001).

Regarding **claim 14**, El-Rafie, Perlman and Chelehmal et al. discloses everything claimed as applied above (*see claim 13*). El-Rafie discloses wherein the link layer defines multiplexing of the signals (see fig 7B (214), col. 24, lines 65-col. 25, lines 14).

However, El-Rafie, Perlman and Chelehmal et al. fail to specifically disclose data over cable services interface specifications (DOCSIS).

Craven et al. discloses data over cable services interface specifications (DOCSIS) (see paragraph 0014, lines 8-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify El-Rafie, Perlman and Chelehmal et al.'s invention with the above mentioned limitation as taught by Craven et al. for the advantage of providing seamless interoperability to cable technology.

Regarding **claim 15**, El-Rafie, Perlman and Chelehmal et al. discloses everything claimed as applied above (*see claim 13*). El-Rafie discloses wherein the link layer (see fig 7B (214).

However, El-Rafie fails to specifically disclose DOCSIS transmission convergence sub-layer that include identifies data packets with packet identifier (PID) 0x1FFE and without an associated adaptation field and the audio and video packets with PIDs other than those having the 0x1FFE designation and with an adaptation field for decoder synchronization.

Craver et al. discloses DOCSIS transmission convergence sub-layer that include identifies data packets with packet identifier (PID) 0x1FFE and without an associated adaptation field and the audio and video packets with PIDs other than those having the 0x1FFE designation and with an adaptation field for decoder synchronization (see paragraphs 0027, 0047, 0049).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify El-Rafie, Perlman and Chelehmal et al.'s invention with the above mentioned limitation as taught by Craven et al. for the advantage of providing seamless interoperability to cable technology.

10. **Claims 17 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Rafie (U.S. Patent No. 6,968,394), Perlman (U.S. Patent No. 6,813,643) and Chelehmal et al. (U.S. Publication No. 2002/0046406) and Craven et al. (U.S.

Publication No. 2005/0123001) as applied to *claim 15* above, and further in view of Chelehmal et al. (U.S. Publication No. 2002/0046406).

Regarding **claim 17**, El-Rafie, Perlman and Chelehmal et al. discloses everything claimed as applied above (*see claim 15*). El-Rafie discloses a transport layer (see fig 7B (212)).

Chelehmal et al. discloses management based on real-time protocols (RTP), user datagram protocols (UDP), transmission control protocols (TCP), and/or MPEG-2 protocols (see paragraphs 0025 and 0028).

Regarding **claim 19**, El-Rafie, Perlman and Chelehmal et al. discloses everything claimed as applied above (*see claim 17*). El-Rafie discloses wherein the network layer defines transmission based on internet protocols (IP) (see col. 15, lines 19-36).

11. **Claims 1-3, 7, 11-12 and 21-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman (U.S. Patent No. 6,813,643) in view of Rakib (U.S. Publication No. 2002/0031120).

Regarding **claim 1**, Perlman discloses a flexible subscriber video device (SVD) configured to support playback of AV signals packetized for delivery in an AV only transport associated with AV packets and an integrated transport associated with AV and data packets, the SVD comprising (see figs 2a-2c):

the switch configured to simultaneously separate packets associated with the AV only transport from packets associated with the integrated transport (col. 2, lines 50-col.

3, line 6, a switch selects a signal from two signals inputted into the switch, therefore if two signals are being simultaneously received then clearly the switch simultaneously selects one of the signals, thereby simultaneously switching between two signals);

a data processor in communication with the switch and configured to separate AV related packets from data related packets included within the integrated transport (see col. 4, lines 51-59).

However, Perlman is silent as to a demultiplexer in communication with the switch and data processor configured to demultiplex AV packets outputted therefrom.

Rakib discloses a demultiplexer in communication with the switch and data processor configured to demultiplex the AV packets outputted therefrom (see paragraph 0078),

a tuner and demodulator configured to tune to a radio frequency (RF) carrier frequency associated with the transport and demodulate the tuned transport for output to a switch (see paragraph 0039), and

a decoder in communication with the demultiplexer and configured to decode AV payloads for output to a video port and an audio port (see paragraph 0083).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Perlman's invention with the above mentioned limitation as taught by Rakib for the advantage of payloads supplied to a decoder are always correct and is therefore useful for DVR players, optical disk players etc.

Regarding **claim 2**, Perlman and Rakib discloses everything claimed as applied above (*see claim 1*). Perlman discloses wherein the AV only transport is associated with a baseline architecture (see col. 4, lines 61-col. 5, line 6, the content providers transmit multimedia content i.e. audio/video content, MPEG2 from the head end to the end user).

Rakib discloses wherein the AV only transport is associated with a baseline architecture (see paragraphs 0033 and 0039).

Regarding **claim 3**, Perlman and Rakib discloses everything claimed as applied above (*see claim 1*). Perlman discloses wherein the integrated transport is associated with an extended mode 1 architecture (see col. 3, lines 41-62, MPEG2 and DOCSIS share the QAM demodulation logic, which implies that the share the same/single stream and that MPEG and DOCSIS stream are combined).

Regarding **claim 7**, Perlman and Rakib discloses everything claimed as applied above (*see claim 1*). Rakib discloses the SVD wherein the decoder is configured for decoding payloads compressed according to MPEG-2 protocols (see paragraph 0057, lines 51-59).

Regarding **claim 11**, Perlman and Rakib discloses everything claimed as applied above (*see claim 1*). Perlman discloses the SVD further comprising a cable modem in communication with the processor for processing data packets (see col. 4, lines 11-23).

Regarding **claim 21**, Perlman discloses a flexible subscriber video device (SVD) configured to support playback of AV signals carried in a first or second transport, the first transport having packets with only AV payloads and the second transport having packets with AV payloads and other packets with data payloads, the SVD comprising (see figs 2a-2c):

a switch configured to simultaneously separate packets associated with the AV only transport from packets associated with the integrated transport (see col. 2, lines 50-col. 3, line 6, a switch selects a signal from two signals inputted into the switch, therefore if two signals are being simultaneously received then clearly the switch simultaneously selects one of the signals, thereby simultaneously switching between two signals);

a data processor in communication with the switch and configured to separate AV related packets from data related packets included within the integrated transport (see col. 4, lines 51-59).

However, Perlman is silent on simultaneously routing the first transport to a demultiplexer and the second transport to a data processor;

wherein the demultiplexer is configured to demultiplex the AV payloads for decoding and output as audio and video signals; and

wherein the data processor is configured to separate the AV payloads from the data payloads carried in the second transport and to output the AV payloads to the demultiplexer and the data payloads to a microprocessor such that the SVD is

configured to simultaneously receive both of the first and second transport streams and to decode and process the associated AV and data payloads.

Rakib discloses simultaneously routing the first transport to a demultiplexer and the second transport to a data processor (see paragraph 0078);

wherein the demultiplexer is configured to demultiplex the AV payloads for decoding and output as audio and video signals (see paragraph 0054); and

wherein the data processor is configured to separate the AV payloads from the data payloads carried in the second transport and to output the AV payloads to the demultiplexer and the data payloads to a microprocessor such that the SVD is configured to simultaneously receive both of the first and second transport streams and to decode and process the associated AV and data payloads (see paragraph 0078).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Perlman's invention with the above mentioned limitation as taught by Rakib for the advantage of payloads supplied to a decoder are always correct and is therefore useful for DVR players, optical disk players etc.

Regarding **claim 22**, Perlman and Rakib discloses everything claimed as applied above (*see claim 2*). Perlman discloses wherein the baseline architecture consists of a scheme in which MPEG AV streams are carried directly over MPEG-2 transport and data packets are carried separately over a DOCSIS MPEG-2 transport such that different transport streams are associated with data and AV packets (see col. 3, lines

48-59, MPEG 2 standard carries audio and video streams together while DOCSIS standard carries audio and video separately).

Regarding **claim 23**, Perlman and Rakib discloses everything claimed as applied above (*see claim 3*). Perlman discloses wherein the extended mode 1 architecture consists of a scheme in which MPEG-2 AV transport packets are combined with DOCSIS data packets in a single DOCSIS MPEG-2 transport stream (see col. 3, lines 48-59, MPEG 2 standard carries audio and video streams together while DOCSIS standard carries audio and video separately).

12. **Claims 4 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman (U.S. Patent No. 6,813,643) and Rakib (U.S. Publication No. 2002/0031120) as applied to *claim 1* above, and further in view of Chelehmal et al. (U.S. Publication No. 2002/0046406).

Regarding **claim 4**, Perlman and Rakib discloses everything claimed as applied above (*see claim 1*). However, Perlman and Rakib are silent on the integrated transport is associated with an extended mode 2 architecture.

Chelehmal et al. discloses the integrated transport is associated with an extended mode 2 architecture (see cited portion, but not limited to paragraphs 0025-0028, RTP, UDP, IP and DOCSIS are being combined).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Perlman and Rakib's invention with the

above mentioned limitation as taught by Chelehmal et al. for the advantage of using other real-time protocols.

Regarding **claim 24**, Perlman and Rakib discloses everything claimed as applied above (*see claim 4*). However, Perlman and Rakib are silent on wherein the extended mode 2 architecture consists of a scheme in which MPEG-2 AV transport packets in RTP payloads over UDP over IP over DOCSIS are combined with DOCSIS data packets in a single DOCSIS MPEG-2 transport stream with the ability to also use other real-time protocols instead of RTP.

Chelehmal et al. discloses wherein the extended mode 2 architecture consists of a scheme in which MPEG-2 AV transport packets in RTP payloads over UDP over IP over DOCSIS are combined with DOCSIS data packets in a single DOCSIS MPEG-2 transport stream with the ability to also use other real-time protocols instead of RTP (see paragraphs 0025-0028).

13. **Claims 8-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman (U.S. Patent No. 6,813,643) and Rakib (U.S. Publication No. 2002/0031120) as applied to *claim 1* above, and further in view of Lu et al. (U.S. Publication No. 2004/0179610).

Regarding **claim 8,** Perlman and Rakib discloses everything claimed as applied above (see claim 1). However, Perlman and Rakib fails to specifically disclose the

decoder is configured for decoding payloads compressed according to advanced video compression (AVC) protocols.

Lu et al. discloses the decoder is configured for decoding payloads compressed according to advanced video compression (AVC) protocols.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Perlman and Rakib's invention with the above mentioned limitation as taught by Lu et al. for the advantage of programs coming into the set top box already compressed into MPEG-2 format.

Regarding **claim 9**, Perlman, Rakib and Lu et al. discloses everything claimed as applied above (*see claim 8*). Lu et al. discloses the AVC protocols are associated with MPEG-4 (see paragraph 0054).

Regarding **claim 10**, Perlman, Rakib and Lu et al. discloses everything claimed as applied above (*see claim 8*). Lu et al. discloses the AVC protocols are associated with H.264 (see paragraph 0054).

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nnenna N. Ekpo whose telephone number is 571-270-1663. The examiner can normally be reached on Monday - Friday 7:30 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Pendleton can be reached on 571-272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Patent Examiner
June 12, 2009.

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